INTRODUCTION

The Bi-monthly Agriculture and Food Security Monitoring System (AFSMS) Bulletin is an FAO-Syria product and system, which regularly monitors the agricultural and food security situation, including on crop, livestock, pasture condition, water supply and food security from randomly selected sub-districts and communities. The monitoring is on a bi-monthly basis (i.e. once every two months), through discussions with key informants (KIs) and input from FAO technical staff in the field.

The AFSMS information portrays the prevailing general situation in the community at the time of each bi-monthly AFSMS reporting cycle, and helps FAO and the Food Security and Agriculture (FSA) sector understand the prevailing agriculture situation, seasonal performance and outlook, including preliminary insights on food availability, access and coping mechanisms being adopted by the majority of households, due to the difficult economic situation which could be affecting access to and availability of food.

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The cumulative precipitation from September 2021 to the end of February 2022 is still generally low. As the cumulative rainfall received during the reporting period is lower than the long-term average (LTA) across all governorates, except in Latakia where the cumulative rainfall exceeded the LTA by 24%. The cumulative rainfall received up to the end of February is 46% and 70% less than the LTA in Aleppo and the northeastern governorates, respectively.

In January, the rainfall was below the LTA by (5 to 53%) in Damascus and Rural Damascus, Al-Gab, Aleppo and NES governorates, while it was higher than LTA in the rest of the governorates by (3 to 30%). In February, the rainfall received was mostly low and less than the LTA by between 34% to 90% across all Governorates, except the coastal governorates, where it was higher than LTA by 14%.

The daytime temperatures recorded in January 2022 ranged from equivalent to the average in Quneitra and Latakia, and higher than the LTA in Tartous, Aleppo, Idlib and Deir ez-Zor, while it was lower than the LTA in the rest of the governorates, especially Al-Hasakeh. In February 2022, the recorded daytime temperatures were generally high and above than the LTA across all Governorates by 2.4 C° on average, especially in Al-Hasakeh where it exceeded the LTA by 4.6 C°.

It is noteworthy that nightly frost occurred in most areas in the southern, central and northeastern Governorates for long periods during January and February 2022.

Dam water stock, in January 2022 improved compared to December 2022 for the current season in most governorates. The dam water stock in some governorates, such as Al-Hasakeh and As-Sweida, were maintained at same level, generally. Compared to the previous season, dam water stocks were generally lower in across all governorates, except for Aleppo and Latakia, where the stocks were 5% and 25% higher than the 2020/2021 agricultural season, respectively.

The current nutritional and health status of livestock, especially sheep and goats, is significantly concerning. This is due to the significant decline of pastures and limited access to the grasslands or grazing lands in some areas. The high cost of livestock feed or fodder continues to limit access, especially for vulnerable livestock keepers. The high prices of feed and limited access, coupled with the low availability mentioned earlier, as well as veterinary medicine and production inputs, continue to burden livestock breeders and constitute a major challenge for them, especially with the decline in livestock prices.

The abovementioned challenges affecting livestock production is subsequently resulting in and contributing to the high cost and prices of animal products, which will also, limit access to and consumption of livestock-based food groups, and compromised dietary diversity.

Most food commodities namely legumes, vegetables, chicken meat, rice, eggs, sugar and vegetable oil were generally available during the January – February 2022 reporting period. However, most households in the community are facing challenges in terms of accessing the available mentioned food items. The major constraint is that the food items are available but expensive, limiting access especially for vulnerable smallholder farmers (VSFs), livestock keepers and their de-
GENERAL AGROMETEOROLOGICAL CONDITIONS

1. Precipitation

1.1. Cumulative Precipitation

Cumulative rainfall up to the end of February 2022 for the current season was good in Latakia governorate (24% above the LTA). While it was weak to very weak in the rest of the governorates, especially in Damascus and Rural Damascus, Aleppo and the northeastern governorates, where recorded rainfall was less than LTA by 31% in Rural Damascus, 46% in Aleppo, 61% in Al-Hasakeh, 70% in Ar-Raqqa and 73% in Deir ez-Zor.

Fig 1: Deviation of cumulative rainfall from average the LTA (%). Up to the end of February of the 2021-2022 rainy season

Source: Analysis of the cumulative rainfall done by FAO technicians based on the daily weather bulletins.

1.2. Monthly precipitations

1.2.1. January 2022:

As highlighted in figure 2, rainfall in January 2022 was week to very weak and less than the LTA in Rural Damascus, Al-Gab, Aleppo and northeastern governorates. The lowest rainfall was received in Aleppo, Raqqa and Deir ez-Zor, representing 22%, 41% and 53% less the LTA respectively. Rainfall was generally good and higher than the average in the rest of the governorates, especially in Dar’a, As-Sweida and Lattakia, where it was above the LTA by (23%, 24% and 30%) respectively.

During the first dekad of January 2022, the rainfall was low to very low, and was particularly limited to the coastal, As-Sweida and Al-Hasakeh governorates, and a few areas in Ar-Raqqa, Deir ez-Zor and Aleppo, as highlighted in figure 1 below. In the second and third dekads of January 2022, heavy rains or down pours we received the coastal, southern governorates, the western areas of Aleppo, Idlib, Hama, Homs, and the northern parts of Ar-Raqqa and Al-Hasakeh. While it was relatively weak in the remaining areas, especially in Deir ez-Zor and the Badia, where precipitation was extremely limited.

1.2.2. February 2022:

The amounts of rainfall received in February 2022 were good in the coastal governorates, with rainfall readings above the LTA by 14%, while it was generally low and below the LTA, ranging between 20% to 90% in all governorates, especially in Quneitra and the northern and northeast governorates. Rainfall recordings indicate that rainfall received was less than LTA by 56% in southern
governorates, 44% in northern governorates, and 81% in northeastern governorates (figure 3).

During the first dekad of February 2022, acceptable to good rainfall was received in Latakia, Tartous and Quneitra. Low rainfall was received in Idlib, Hama and different parts of the rest of the governorates. It is important to note that there was no rainfall received in Deir ez-Zor and all regions of Al-Badia.

It rained lightly in the eastern regions of the Badia in the second dekad of February 2022, while no rain fell in the rest of the regions and governorates.

In the third dekad of February 2022, rainfall was good in Lattakia and Quneitra, and acceptable in Tartous, while it was quite limited in the rest of the governorates and regions. Key to note is that no rainfall was received in Deir ez-Zor, rural Damascus and Al-Badia during the third dekad of February 2022.

2. Temperature
2.1. January 2022

The daytime temperatures recorded in January 2022 varied between below LTA in the central governorates by -0.3 °C, -0.5 °C in the southern governorates and -0.8 °C in northeastern governorates. Daytime temperatures were higher than LTA by 0.4 °C in the coastal governorates and 1.9 °C in northwestern governorates (figure 4).

2.2. February 2022

The daytime temperatures recorded in February 2022 were higher than LTA in all governorates by 2.4 °C on average. The highest daytime temperatures were recorded in the northeastern governorates and this was 3.7 °C above average, while it was 1.7 °C, 1.8 °C, 2.2 °C and 2.3 °C above averages in coastal, southern, central, northwestern governorates respectively (figure 5).

SECTION B: NORMALIZED DIFFERENCE VEGETATION INDEX (NDVI)

The normalized difference vegetation index is a graphical indicator that FAO Syria is using to analyze remote sensing measurements from the GIEWS so as to assess whether or not the land under observation and monitoring contains live green vegetation. During this reporting period, there was a slight improvement in the vegetation status and cover in the coastal and southern governorates, especially in Dar’a and western areas of Rural Damascus, compared to December 2021. The NDVI ratings and vegetation status in the afore-mentioned areas were close to the LTA and in some case above the LTA by up to 10%. On the contrary, the vegetation status declined in the northeastern governorates, and maintained the deteriorating situation in the rest of the governorates and regions, especially the northwestern.

As the season progressed from January to February 2022, the vegetation status, as represented by the NDVI, wors-
and the eastern areas of Hama governorate. The NDVI and vegetation status and cover decreased from the LTA by about 10% - 20% in Rural Damascus and Al-Badia, 15% - 35% in the northeastern governorates and 25% - 45% in the northwestern governorates and eastern areas of Hama governorate (figure 6).

SECTION C: WATER SUPPLY SITUATION

During this reporting period, there has been limited water supply from the different irrigation/water sources (i.e. ground sources, rivers, and reservoirs such as lakes and dams), especially in Al-Hasakeh and southern governorates. The limited rainfall received to date, has not helped the water supply situation in the mentioned governorates, since the current water levels are only estimated to be 27% in Al-Hasakeh and the central governorates, and up to 21% in the southern governorates.

From December to January 2022, water stocks maintained the same significantly low level in Al-Hasakah governorate, while the level improved in the rest of the governorates. The greatest improvement was in Aleppo and the coastal governorates, where stocks increased by 15% and 18%, respectively.

Comparing the current water stocks to same period last season, there are indications that the stocks are 2% - 24% lower than the previous season in the southern, central governorates and in Al-Hasakeh, while they are higher by about 5% - 7% in Aleppo and the coastal governorates (figure 7).

SECTION D: SUMMARY ON PROGRESS OF 2021/2022 CROPPING SEASON

As of end of February 2022, the cultivated area for the current 2021 – 2022 agricultural season amounted to about 1.18 million hectares under wheat and 1.09 million hectares under barley (Source: MAAR, 2022). The cultivated area is equivalent to an estimated 80 percent of the area cultivated last season. The area planted under food legumes reached about 113,000 hectares and this represents about 75% of the area cultivated under food legumes last season, as shown in figure 8 below. As mentioned in previous FAO AFSMS bulletins, the poor agro-climatic conditions and the low production and productivity of crops during the 2020/2021 agricultural season, in addition to the delayed onset observed for the 2021/2022 agricultural season, resulted in the delayed land preparation and sowing by most farmers. The aforementioned challenges resulted in a decrease in total cultivated or cropped area compared to the previous season. FAO will continue to closely monitor the situation, especially in June – August 2022, which is the peak harvest period.

During the observation period covered by this report, the area planted under wheat and barley ranged between germination and early vegetative growth stages, while the rest of the crops, such as legumes, ranged between vegetative growth and flowering stage.

Harvesting and marketing of winter vegetables, autumn potatoes, leafy vegetables, and citrus fruits continued during this reporting period. In addition to the start of
harvesting and marketing of vegetables cultivated and produced in the greenhouses.

**Figure 8:** Graphical comparison and depiction of area planted under wheat and barley during the current 2021 – 2022 agricultural season, compared to the previous season (2020 – 2021) as of February 2022.

*Source: FAO field monitoring reports*

The condition of wheat, barley and other crops is generally fair to poor, especially for rainfed systems in the northeastern governorates and the eastern regions of Hama, Homs and Rural Damascus. However, the crop condition for wheat, barley and other field crops is generally acceptable in the rest of the governorates and regions. It is also important to highlight that many greenhouses and some vegetable farms in the coastal governorates were damaged due to severe storms and frost reported in the above sections. The frost significantly affected the grown vegetables and other crops due to frost injury, in most of the governorates especially Dar’a, Al-Hasakeh, Deir ez-Zor and Rural Damascus.

The other challenge that farmers faced during this current season is the limited access to fertilizers due to the exorbitant cost in local currency. Furthermore, the severe shortage of energy, especially electricity, which became much worse during the winter season due to the increase in the frequency and hours of rationing, worsened the situation. This forced most farmers to use fuel for irrigation and other heating purposes, which resulted in the slight increase in diesel prices across most local markets, due to increased demand.

**SECTION E: LIVESTOCK SITUATION AND CONDITION**

January and February 2022 was quite difficult for livestock herders and keepers, since there was a general lack of availability of pastures and crop residues in the Baedia. Most animals rely on pasture availability and crop residue for their nutritional needs, growth and development, especially during the critical lean period. It is important to note that livestock feed / fodder availability was generally limited and costly, and the poor rainfall, low night temperatures (below zero centigrade) and unfavorable pasture rejuvenation in January -February 2022 has presented an additional layer of challenges on livestock production and productivity. The effect of the erratic rainfall on vegetation growth and pasture availability will most likely be felt by livestock keepers in the coming months.

Although veterinary services are available in most areas, the cost and prices of veterinary medicines are very high, which has led many breeders to neglect veterinary care because of their inability to bear the costs. Combined with the lack of pastures and the high price of livestock feed, the nutritional and health status of the livestock has declined. As a result of these conditions, there were some reported cases of newborn deaths of sheep and miscarriages in Deir ez-Zor, Al-Hasakeh and Homs, though there were quite low and limited.

While the prices of most fodder, in addition to dairy products, continued to rise, the prices of livestock were stable or decreased in most governorates, especially the northeastern. This is significantly impacting the viability of livestock based livelihoods.

As for poultry breeders, production costs have increased significantly due to the high cost of production requirements as well as the fuel needed to secure lighting, heating and to operate automated equipment. Access to fuel...
increase in poultry production costs is being reflected by the increase in prices of eggs and broiler meat in the local markets, as reported by January and February 2022 FAO Agriculture Input and Commodity Price Bulletins.

The pasture condition and situation in the current 2021 – 2022 agricultural season and during the reporting period is worse than the previous season, and therefore the livestock condition is concerning and needs urgent support. Urgent support should be directed, towards ready-made animal feeds or alternatives to green fodder production, ensuring that livestock interventions are integrated with sustainable approaches for greater and wider impact, to help livestock breeders to be more resilient to current and future shocks.

SECTION F: FOOD SECURITY AND COPING STRATEGIES

The increased needs due to the peak winter season exerted more pressure on the already limited purchasing power and this continues to make the situation more difficult for families to economically access sufficient and nutritious food. Field monitoring by FAO indicates that most vulnerable families are reporting increased dependence on less preferred and less expensive foods, limiting the amount of food in the meal (i.e. portion size) and reducing the number of meals. Other food-based negative coping strategies include restricting the consumption of adults so that the young eat or borrowing food.

One of the negative coping measures related to nutrition, which some vulnerable populations has recently adopted is to rely more on leafy vegetables (chard - spinach – cabbage etc). This is because these are more available during winter and are relatively cheaper. However, despite their good nutritional value, they do not replace the major macro-nutrients like carbohydrates, fat and proteins.

As highlighted in earlier AFSMS bulletins, good food reflects on public health, and people's lack of adequate and nutritious food is reflected in the long-term by increased prevalence of malnutrition in children due to the lack of micronutrients. The deficiency may compromise the body's immunity and resistance to diseases. With the prevailing spread of Covid-19, good and nutritious food is one of the most important factors that can help boost immunity and resistance to disease.

It is worth noting that the farming households that suffered from the extreme agro-climatic conditions during the 2020 – 2021 season, and the failure of their crops and the deterioration of their livestock-based livelihoods and assets, has increased vulnerability and eroded resilience. There is urgent need to cushion and support vulnerable smallholder farmers impacted by the 2020 – 2021 drought-like conditions and the current erratic season, through provision of critical quality inputs to sustain agricultural production, combined with capacity building on good agricultural practices, including climate smart agriculture (CSA) approaches.

Recommendations

* Raising awareness and motivating farmers to rationalize the utilization of irrigation water, given the increased demand for it in the coming months. Sector partners and farmers are also encouraged to adopt water saving / conservation techniques and other context-specific Climate Smart Irrigation (CSI) approaches, which will increase water use efficiency (WUE) in agriculture,

* Intensifying field monitoring of crops, since with rising temperatures, there is a possibility of increased pest pressure and spreading and infection of agricultural crops,
- The rehabilitation of water and irrigation systems and canals, remains critical since water is one of the key inputs for food production. The link between water and food and nutrition security is important in the short, medium to long term. Furthermore, the light rehabilitation of the afore-mentioned irrigation infrastructure will enhance the farmers’ access to irrigation water, as there are indications that the 2021/2022 agricultural season and water scarcity could be similar to the previous season.

- Motivating farmers to plant and manage fodder crops and adopt modern and climate smart methods to create a reserve stock of fodder to bridge the gap of lack of pastures and lack of fodder, remains key. Where feasible and using an area-based approach, sector partners and farmers are also encouraged to consider rotating or intercropping of vegetable crops with fodder legumes as they will provide soil fertility benefits and animal feed, serving a dual purpose.

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Disclaimer: The information contained herein, is based on FAO’s Global Information and Early Warning System (GIEWS), collection of bi-monthly Agriculture and Food Security Monitoring System (AFSMS) data and triangulation of local weather periodicals. The data presented herein also captures results from field monitoring of crops, livestock and water resources done by FAO field staff. While FAO Syria strives to provide accurate and timely early warning information, there may be slight unintended technical or factual inaccuracies. Decisions based on information contained herein are the sole responsibility of the reader.

For more in-depth statistics and trends:

- Refer to WFP Syria mVAM Bulletin for January - February 2021.
- Request for the FSA/FSLA factsheets for 2020 from the Food and Agriculture Sector (FAS) for details on food access and food insecurity prevalence by governorate and sub-district.